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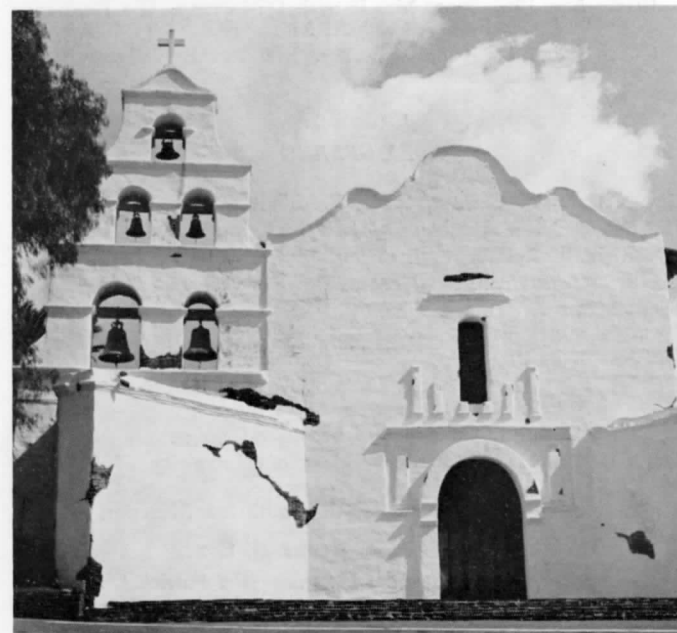
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# The Masterkey

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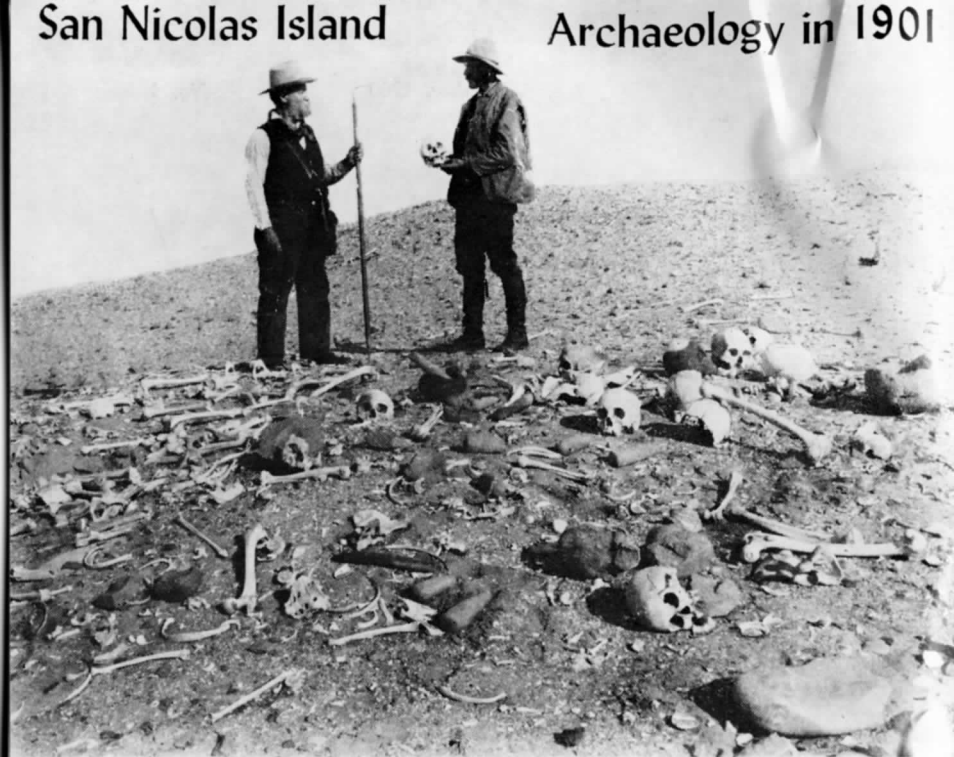
No. 3



## HISTORIC SITE ARCHAEOLOGY AT SAN DIEGO

The Mission San Diego de Alcalá as it appears today. Primary restoration work has been done on the church proper and the west side of the quadrangle complex. See Page 100.

## SOUTHWEST MUSEUM



This photograph was published in the *Overland Monthly* for May, 1896, as one of the illustrations in the article, "The Deserted Homes of a Lost People," by Lorenzo Gordon Yates, one of the earliest scientific investigators to visit San Nicolas Island.

By PHILIP MILLS JONES<sup>1</sup>

### Editor's Preface

MRS. PHOEBE APPERSON HEARST was a patroness of the University of California and (with the aid of F. W. Putnam and President B. I. Wheeler of the University) was mainly responsible for the establish-

<sup>1</sup>Extracted from Jones' manuscript report and edited by Robert F. Heizer. All citations to works published after 1901 are by the editor.

ment of Anthropology at Berkeley. Anthropology was less of an academic subject in 1900 than it is today, and one of the desiderata in establishing the subject was the accumulation of ethnological and archaeological collections for study and museum display. Mrs. Hearst secured the services of Max Uhle, who amassed a collection of Peruvian archaeological materials; of George Reisner, who excavated in Egypt and was responsible for the large and important collection at Berkeley; and of a local physician, P. M. Jones, who made ethnographic collections in British Columbia and the Plains, and who carried out archaeological surveys and excavations near Stockton, on Santa Rosa Island and in other California localities. Jones published little, but his reports were typewritten and bound with photographs taken by him. They are full of detail, and it is clear that he was a very intelligent and industrious investigator who did, even by modern standards, first-rate work.

In 1901 Jones spent five days making a survey of San Nicolas Island. His report (with long quotations from published sources deleted) is published here in the belief that it represents a useful addition to our knowledge of the island archaeology. Of particular interest is the record of the introduction of sheep and the alteration of the topography as a result of overgrazing. Of the old woman's possessions, said to have been found by Mr. Merritt in 1866 (13 years after her rescue) in a cave, nothing further seems to be known. If Merritt had made such a find it is curious that more was not said about it in view of the fact that by 1866 the story of the "Lost Woman" of San Nicolas Island, Juana Maria, had been published, was well known, and clearly a matter of great interest (see Univ. of Calif. Arch. Survey Report No. 55, 1961).

### Jones' Account

January 27th, 1901, found me again in Los Angeles, prepared to start on the following day for San Nicolas Island. But we were again delayed by the non-arrival of the schooner that had been chartered, and it was not until February 2nd that we actually got on our way to the Island.

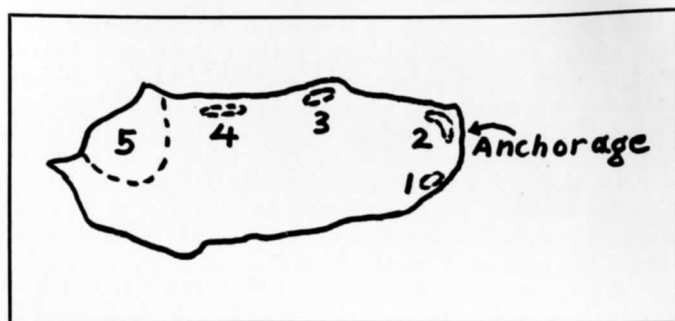


Fig. 1. Line tracing of Jones' Plate 10 showing location of the five main campsites on San Nicolas Island visited by him in 1901.

The party consisted of seven besides myself; two geologists, Messrs. Homer Hamlin, of the U.S. Geological Survey, and H. O. Wood of Los Angeles, and five gentlemen who were interested in the exploitation of the island as an oil field, should the reports of the geologists prove favorable. The weather was very bad during the whole trip, wind and rain prevailing during almost the entire time we were away. The 3rd, 4th, 5th, 6th, and 7th, of February, were spent in exploring the island, Mr. Hamlin and myself working together, and practically every part of the island was carefully gone over.

The Island of San Nicolas [Fig. 1], nearly eighty miles southwest of Santa Monica, is the most detached and exposed of all the islands of the Channel group. Like the others the major axis is approximately parallel with the coast line of the mainland, and its dimensions are roughly nine miles long, with a maximum width of three and three quarters miles. It may be generally described as a faulted block of sedimentary strata, sandstones and shales of the Miocene period forming the material. The strike is N 40° to 50° W, (magnetic), and the dip ranges from 10° to 14°. An excellent topographical description is given by W. S. Tangier Smith in Univ. of California Bulletin of the Dept. of Geology, Vol. 2, No. 7, p. 185.

I noted terraces, on the northern side, at 40, 150, 425, 550, and 875 feet elevation, but could detect no

well defined terraces on the southern side of the island. These altitudes correspond very nearly with those given for San Clemente Island, as tabulated by W. S. T. Smith (U.S.G.S. 18th Annual Report, 1898, Part II, pages 459 to 496).

While it is probably true that the surface topography of the island has been greatly altered in the past seventy-five years, still at no time could San Nicolas have been at all comparable to the mainland coast of Santa Barbara County, as a habitat, so far as climate and water supply are concerned. The latter is limited in quantity and poor in quality: the climate is cold, damp, windy, and foggy, most of the time. Firewood is now obtained only from such drift wood as is washed ashore, but it is probable that during the time of its aboriginal occupancy, some parts of the island were covered with brush and scrubby trees, the charred roots of which may still be found, here and there. It is wind-swept and fog-bathed for a majority of the days from year's end to year's end, and indeed, as an aboriginal habitat, has but one thing to recommend it: the enormous quantities of sea food, obtainable with but trifling effort, from its rough shores or in the nearby waters.

San Nicolas Island seems to have been named by Vizcaino, who is the first of the early explorers to make any mention of this one of the Channel Islands.<sup>2</sup>

There are several things of interest in these various accounts. It is almost unbelievable that, if the original population was very great, thirty Kodiak Indians in 1811 could have so killed off the inhabitants that only seven or eight remained in 1835. We also learn from these narratives, that three of the aboriginal whalebone huts were in existence as late as 1853, and that wild dogs were very numerous on the islands up to about 1835; their skeletons are frequently encountered in the refuse heaps on all the islands it is said, yet no specimen is known to have been alive as late as 1850, unless the dog mentioned as "growling" when Brown appeared, was one of these. These skeletons of "wild dogs" may really be skeletons of sea otters.

I am advised by Mr. Charles Merritt, of Santa Bar-

<sup>2</sup>Deleted here is a lengthy account, with long quotations from published sources, of the lone woman of San Nicolas Island. All of these have been cited and reproduced in Univ. of Calif. Arch. Survey Report No. 55:1-55, 1961 (Ed.).

bara, that his brother-in-law, Mr. M. M. Kimberley, put the first sheep on San Nicolas Island in 1852 or 1853, and this lot consisted of 500 Mexican ewes and a few rams. This must have been just about the time that the old woman was removed; Mr. Merritt says there were no dogs, that he knows of, on the island at that time.

Recent destructive erosions by wind, rain, and sand, undoubtedly date their commencement from the time when these sheep were first placed on the island by Mr. Kimberley. Indeed the next succeeding twenty-five years must have produced great changes in the surface topography of the island, for the destructive effect of the sheep was made evident almost at once. At that time the island was well covered with grass, weeds, and in places, with a considerable growth of brush, six to eight feet high. The first dry season, however, saw the end of the brush; the sheep ate it off as high as they could reach, and their sharp hoofs cut up the ground about its roots. At the western end of the island, where the sand dunes now stretch inland as far as the second cañon from that extremity of the island, the surface was well covered with vegetation to within a quarter of a mile from the coast line; now there are about three miles of dunes, and the house and buildings erected by Mr. Kimberley are covered many feet deep with drifting sand which has almost obliterated the cañon just west of Corral Harbor. The present condition is well shown in photographs A 206 and A 207 [not reproduced here]; the former illustrates Corral Harbor, with the ever encroaching sand, and the latter is a fairly good photograph of the canyon just west of Corral Harbor.

As nearly as I could judge from the information gathered from Mr. Merritt, the formation and migration of the extensive sand dunes now so noticeable on San Nicolas Island, commenced about the year 1866. Up to that time he had not noticed them, but shortly afterward he observed that large tracts of land, formerly covered with vegetation and furnishing good pasture, were now bare and had become simply shifting sand dunes. Many village sites which were subsequently denuded and eroded into the present form of "shell heaps", were then covered with soil and veg-

etation. About this time, or somewhat earlier, a fire occurred, probably originating from the camp-fire of some sea-otter hunting party, which burned up all the dead brush. The charred roots of this brush may still be seen, here and there, protruding from the sand, or lying on the surface, having been entirely uncovered by the wind.

In 1866 Mr. Merritt found a cave in which the lone woman had lived, and in it were a number of her former possessions, still in a fairly good state of preservation. He mentioned a garment of some sort, made of a kind of netting fashioned from sinew and covered with feathers fastened on with sinew, some arrow-points, stone knives, and a few abalone pearls. There were no pictographs or markings on the walls of the cave, at that time, though the walls were smoke-blackened.

The next mention of San Nicolas, chronologically, is by H. C. Yarrow in Appendix JJ of the Annual Report of the Geographical Surveys West of the 100th Meridian for 1876, p. 313. [Refers to *Annual Report, Chief of Engineers*, 1876: p. 312. Government Printing Office, Washington.]

Paul Schumacher undertook the work of collecting ethnologic material from the graves and shell heaps of San Nicolas Island, in 1875, and collected quite a large amount of excellent material, though he was rather careless about recording full data in regard to the conditions as he found them. Since the time of Schumacher's work, a large number of collectors have visited the island, with more or less success, so far as the accumulation of ethnologic specimens is concerned. Certain it is, however, that a vast amount of material has been removed from the island since 1875, and a great deal of it has been widely dissipated, or destroyed. How much may remain is an unknown question, for the sand dunes, drifting from year to year, as they are shifted by the driving wind, have doubtless buried many village sites fathoms deep in the loose sand, at the same time that other village or camp sites have been uncovered. Of the uncovered material to be found on the surface at present, (or, at least, at the time of my visit), nothing to speak of was worth taking away. It consisted of refuse, miscellaneous bones, broken

mortars and pestles, and abalone shells in great profusion. I came to the conclusion from an inspection of the abandoned camp and village sites, and the extensive shell heaps, that the Indians had been accustomed to gather large quantities of abalones at a time, which were removed from the shells and dried at or near their camping places. Subsequent preparation for eating would necessitate the use of some sort of mortar, or other grinding or pounding apparatus, for the dried abalone is not only tough, but very hard. That the Indians of the coast, farther north, thus gathered and dried clams for future consumption, there is ample evidence. Indeed I have myself observed this fact amongst the Indians about Puget Sound.

A fairly considerable collection, — some 1203 pieces, — was made here in the summer of 1897, by Mr. DeMoss Bowers and others, a printed catalogue of which was issued a few months later. [Catalogue of Indian Antiquities from San Nicolas Island, California. No author; no place; no date; probably by H. N. Rust, and printed in Los Angeles, 1897 or 1898.] This I believe is the last collection of any extent that has been made upon San Nicolas Island, and the prospects of making any considerable collection there are not good. It is possible that in the course of time the wind may shift large dunes of sand and thus uncover hitherto buried village or camp sites, but this is purely problematical. A notice in regard to this expedition printed in *The Antiquarian* (August, 1897, p. 224) is worthy of note:

After nearly three weeks sojourn in the barren island of San Nicolas, a party of relic hunters has reached Long Beach.

The party found eighty-seven skulls buried in the sand of the island, but were only able to secure three entire. They made one excavation twenty feet square, in which they found nine skeletons in a crouching attitude, as though men, women, and children had been buried alive. In another place they found the remains of hundreds of bodies that had been buried. Evidence was found that the islands were inhabited by two or more different tribes.

I have personally examined this collection with great care, but have failed to find any evidence that would go to show the presence of "two or more different tribes" on the island. I presume that this theory as to



Fig. 2. A. L. Kroeber (right) and F. W. Putnam (center) on Santa Catalina Island in 1904.

the existence of two or more tribes originated with Putnam [Fig. 2] in his contributions to the seventh volume of Wheeler's Survey, and has since been handed down. As a matter of fact, Putnam simply claimed that the Indians of Santa Catalina were of a different tribe or race from those on the other islands and the mainland, and based his opinion upon the craniometric measurements of a comparatively few crania, and on the finding of a few carved or sculptured stone objects, rude representations of animals, on Santa Catalina Island. He seems to have been of the opinion that these carved or sculptured, animal-shaped objects were found only on Santa Catalina Island, whereas they have been found on San Nicolas, San Clemente, and Santa Rosa Islands, and in burial places on the nearby mainland.

Why Putnam should throw out the evidence of Schumacher, who actually found the specimens and has testified to that effect, simply because some stupid person in the National Museum blundered and placed a wrong label on the specimens after they were received at that institution, I cannot see. It seems certain



that such specimens have been found in burial grounds not located on Santa Catalina Island, and therefore to draw any special conclusions from them, as relating to that island alone, does not seem to be warranted or justified.

Another error that has been made apropos of this same collection from San Nicolas Island, should, I think be corrected. The editor of the *American Archaeologist* (April, 1898, p. 101) commenting on a letter to that journal by Horatio N. Rust, of Pasadena, in which he gives some description of the collection says:

Among these are many objects of steatite and serpentine, minerals not found on the island. The nearest known source of steatite is on Catalina Island, fifty miles distant, and that of serpentine is at Piedras Blancas.

Santa Catalina Island was undoubtedly the source of both steatite and serpentine, for though serpentine does occur at Piedras Blancas, it is not of such quality as used by the Indians, and does not at all correspond with the serpentine objects found on the islands and the nearby mainland, whereas the serpentine from Santa Catalina Island corresponds in every particular with that of the manufactured articles.

Plate No. 10 [Fig. 1 here], which is a fragment of chart No. 5200, of the Coast survey charts, shows the location of the various camp sites or shell heaps which were in evidence at the time of my visit. They [occur] in five well defined locations, numbered consecutively from 1 to 5, commencing at the southeast extremity of the island. Group No. 5, at the extreme north-west portion of the island, (where the exposure of wind, fog, etc., is greatest and where the habitat, climatically, is poorest), covers several miles of the surface. The camp sites were probably located here on account of the proximity of the best and only good spring of water, the abundance of shell-food, and the outcropping of a stratum of sandstone that contains large numbers of almost spherical concretions, the use and value of which will be discussed later on.

Paul Schumacher's work on San Nicolas, in 1875, was the first scientific archaeological work on the island, and many of his observations and findings are of direct import. As will be seen from an inspection of the rough drawing of the island, plate 11 [not repro-

duced here] copied from Schumacher's plate 16, No. 9, he located and investigated practically all the camp sites and obtained material from most of them.<sup>3</sup>

Several things in the article published by Schumacher in 1877 are worthy of note. He visited the island in 1875; sheep had then been on the island for about 22 years (assuming that it was 1853 when introduced by Mr. Kimberley, according to the statement made to me by Mr. Merritt) and the destructive effect was so marked as to be strongly commented upon by Schumacher. Merritt says the denudation of the surface and the formation of the dunes did not commence till about 1866, or some nine years before Schumacher visited the island. This period would be ample in which to produce, by means of aerial erosion, great changes in the surface configuration. These facts do not appear to have been considered by Schumacher, who seems to assume that the present condition of denudation existed at the time of aboriginal occupancy, and that the camp sites of the Indians were then, as now, made upon the bare sand, or upon slight hillocks or mounds, which he, and all subsequent visitors, refer to as "shell heaps". That this is not true is quite evident when the surface topography is carefully studied; it then becomes evident that erosion has resulted in the formation of these hillocks, or mounds, and that the erosion was permitted by, and took place immediately after, the destruction of the vegetation by the sheep. The presence of shells, bones, stones of all sorts, including fragments of mortars and pestles, cooking-stones, hammer-stones, etc., in the immediate vicinity of the camp sites, would, and in fact does, have a tendency to tie down the loose soil, and thus retard erosion; the result is evident, for the surrounding territory, in which practically no stones, shells, refuse, etc., are encountered and which consequently is in no way tied down, is rapidly eroded, leaving the camp site a somewhat elevated mound or hillock. In some instances a natural rolling tendency of the surface, the tops of such slight elevations having been utilized as camp sites, has been very greatly exaggerated by sub-

<sup>3</sup>See the extensive bibliography published by E. N. Anderson in Univ. of Calif. Arch. Survey Report No. 61, for citations to the numerous papers of Schumacher (Ed.).

sequent erosion, and the elevations now appear disproportionately great. Very many of such examples might be cited, but a few will, I think, suffice. That the same causes have operated to produce the same effects upon Santa Rosa Island, is equally true, and in many cases much more beautifully illustrated, as will appear in the consideration of the work upon that island. Photograph A 205,<sup>4</sup> which shows a shell heap at the place marked 2 on my accompanying map, illustrates very clearly the form of erosion just mentioned, in which a slight elevation is formed in what was originally a practically level plain. Photograph A 210, taken at the place marked 3 on the map, also illustrates the same thing; as does photograph A 204, of the place marked 5; A 209 of 4, and A 211 of 5, show fairly well the second condition, where a natural slight elevation, or roll, has been greatly exaggerated. Mr. Homer Hamlin, to whom I expressed this opinion as to the manner in which these "shell heaps" had arrived at their present condition, at the time of examining them, quite agreed with me, both as to the explanation itself and also in the opinion that ample time to produce these changes, in view of the steady, high winds which prevail, had elapsed.

The "pebbles of uniform size, about as large as a pigeon's egg, apparently covered with asphaltum, or burnt and blackened by fire", mentioned by Schumacher in his 1877 report were also observed by myself on San Nicolas, as well as at other places.

The following extracts are taken from my journal while on San Nicolas Island:

Sunday, February 3rd. Reached San Nicolas Island 2:30 P.M., and leaving the others of the party to attend to the disembarking of our things, started, in company with Mr. Hamlin, to explore the eastern end of the island. At the place marked "Anchorage" on the map [Fig. 1] is a fair landing, in smooth water, and here are located a hut for the sheep herder, and wool packing and shearing sheds; we slept in the latter. Southwest of the house and about three-quarters of a mile distant, are traces of a small camp site, marked 1 on the map. This, as well as the camp sites marked 2, 3,

<sup>4</sup>This photograph, as well as the four mentioned below in this paragraph, are not reproduced here (Ed.).

and 4, is located on the first bench or terrace, averaging 40 feet above high water. This camp site, (No. 1), is apparently of large size, but is actually very small. There is here a considerable deposit of shells of the *Olivella biplicata*, and these give it the appearance of a large shell heap. It is quite possible that the *Olivella* was found more plentifully and easily at this portion of the island, and that here the Indians came to gather these shells. No signs of burials could be observed at this place. We then crossed the island, traveling almost due north and climbing to the top of the ridge, the general direction of which is east-west. On the upper plateau are traces of camp fires, but no signs of permanent camp sites. Descending on the north side, and swinging somewhat to the east, we reached the camp site No. 2, which we carefully inspected. Here are really three camp sites, very near together, and the remains of broken mortars, and pestles, together with fragments of whale and human bones, are very plentiful. These camp sites, which collectively form group No. 2 were excavated in 1875 by Schumacher, and what he left was subsequently gathered by several other parties headed by Dr. Palmer, Dr. Bowers, and others. I noticed the three bones which unite at the elbow joint, protruding from the sand and in their normal relations, and with trifling effort was able to scrape away what little sand covered this skeleton. The skull had been comminuted and all the bones were badly rotted by the extremely wet sand in which they were buried, so that it was impossible to save any of them. The position was the usual crouching attitude, the body lying on the left side, head to the south and face to the west. Nothing was found with the skeleton. I noted that the sand in immediate contact with the bones seemed to be somewhat blackened, as though it had been mixed with charcoal or asphaltum.

Monday, Feb. 4th. Left camp at 7:15 A.M., in company, with Mr. Hamlin, to explore the north side of the island, from the house west. About two and one half miles from the house, and on the northern side of the island, we encountered another group of camp sites, No. 3. Burials here have been very numerous, but the entire place has been thoroughly excavated. The surface is strewn with whale and human bones,

fragments of cooking stones, shells, broken and unfinished mortars, etc. Here, as well as at the extreme western end of the island, is an outcrop of a stratum of sandstone that has a peculiar interest for the archaeologist. It is filled with rounded concretions, ranging from five to twenty inches in diameter, most of them curiously eroded. Some have been entirely detached; others are nearly detached from the matrix, leaving the tougher, almost globular concretion, attached only by a small stem, thus furnishing the Indian workman a mortar finished on the outside. Others, while retained either wholly or partially in the matrix, have been hollowed, by erosion, more or less completely, and only need pecking out from the matrix and smoothing on the outside, to yield the finished mortar. Mr. Hamlin and I made some experiments which led us to estimate that the Indian, with his experience, could finish a mortar of this sort in from half a day to a couple of days.<sup>5</sup> The finding of these partly worked and broken concretions on the surface of the camp sites, together with the observation of the concretion-bearing sandstone stratum so conveniently nearby, cleared up what had been a puzzle to me for some years. I could not, previously, understand why so many sandstone mortars had been found on San Nicolas and San Clemente Islands, but in view of the facts as stated, the explanation was apparent. It is probably these detached concretions which are referred to by Mr. Paul Schumacher as "beach-worn boulders of basalt." Basalt does not occur on San Clemente Island, so far as I am aware, but strata of the Miocene, which may carry these concretions on San Clemente as they do on San Nicolas, outcrop near the shore of San Clemente at the place mentioned by Schumacher as being the site of a mortar-making camp, and are shown on the "Geological Map of San Clemente Island," by W. S. T. Smith, accompanying his paper on the geology of San Clemente Island, published in the Eighteenth Annual Report of the Geological Survey. A similar stratum of sandstone, carrying numerous globular concretions, is noted on Santa Rosa Island, though in a location where the concretions are

<sup>5</sup>On mortar manufacture see article by Bruce Bryan in *The Masterkey* 35:134-139, 1961 (Ed.).

less useful. My collection from that Island, however, contains types illustrating many forms of this sort of mortar.

I attempted to photograph a good specimen of this sandstone formation in which were the eroded concretions, but both times it was impossible to secure a photograph, on account of the heavy rain and lack of sufficient illumination.

To resume the journal:

About one mile east of Corral Harbor, in the large group of camp sites No. 4, I noticed two red-backed abalone shells, face down and close together, on the surface of the sand. On turning them over it was apparent that a skull was beneath, and excavating with fragments of shells soon disclosed the skeleton. The position was the customary one, the body having been placed on the right side, with the head to the west. With it, and lying in the sand at the right elbow, were a few shell beads of the *Olivella biplicata*, a ring of serpentine, one and one-quarter inches in diameter, and a small but very finely finished shell hook, of the variety classed as "fish hooks", by Rau, Schumacher, and others. The sand in the immediate vicinity of the skeleton was blackened with what I could easily recognize as disintegrated asphaltum, a few fragments of it still remaining. The bones of the skeleton had become as much rotted as the asphaltum, and crumbled at the gentlest touch. One and one-half miles west of Corral Harbor, in the camp site most northerly of group No. 5, two other skeletons were found; while no objects had been buried with these last bodies, they are of special interest as they both showed conclusive evidence of having been covered with asphaltum at the time of burial. I was fortunate enough to secure some fragments of the face and cranium of one of these bodies, as well as a good sized mass of the asphaltum which had been plastered over the head. This mass shows a cast of the hair, but does not evidence any impression of fibres of matting, etc., as would be the case if the body had first been wrapped in matting and then plastered with asphaltum.

Judging from the fact that, of four bodies which I found on this island, three of them showed evidence of having been covered or coated with asphaltum, it would



seem natural to suppose that this form of burial, rather unique in its nature, was fairly common on the island. Yet, of the many men who have excavated here, and disinterred several hundreds of bodies, no mention is made of the fact having been noted, with one possible exception. In the matter already quoted from Schumacher's report occurs the following: "Many of the bodies show signs of having been buried in matting coated with asphaltum."

These graves were found on Wednesday, Feb. 6th. The previous day had been spent in exploring the interior of the island, and the southern side. A few traces of camp fires were observed on the upper plateau, but no permanent camp sites are found there, nor on the southern coast. General observations upon the formation of the island, character of the rocks, erosion, etc., were made, but no facts of ethnologic interest were recorded.

Thursday, Feb. 7th, was devoted to the exploration of the western extremity of the island, and especially the group of camp sites No. 5. Here the camp sites begin along the coast line, on the first bench or terrace, and extend inland for some two miles, following the rise of the island, up to the fairly well defined 425 feet terrace. At the present time there are no well defined camp sites, owing to the wind erosion, but the camp refuse stretches along from dune to dune, and one may walk for miles over the accumulated refuse, consisting of shells, bones, cooking stones, broken mortars, pestles, fragments of soapstone cooking dishes, etc., etc. This has been the favorite hunting ground of the relic hunter, ever since the days of Schumacher: indeed, much of Schumacher's collection was made here. The wind having uncovered the camp sites and burial places, all that was required was an ability to see objects on the ground, and energy to stoop over and pick them up. Now, however, scarcely anything remains that is worth picking up. What may be buried it is, of course, impossible to say; doubtless many camp sites are still covered, but will some day be laid bare by the ceaseless action of the wind.

We left San Nicolas Island on Thursday, Feb. 7th, 1901, at 3 P.M., and reached San Pedro about four in the morning of Friday, the 8th.